

WHAT IS CLAIMED IS:

1. A remote power management method for use in a multi-node data processing system, comprising:

5 configuring the system to include at least one multi-node partition;

determining an identifier associated with each network interface card (NIC) in the partition; and

10 based at least in part on the determined NIC identifiers, modifying wake-on LAN (WOL) filters of each NIC in the partition to include at least one WOL filter common to all of the NIC's in the partition, wherein a WOL packet corresponding to the at least one common WOL filter produces a reset on the corresponding node such that each partition node is
15 reset in response to the WOL packet.

2. The method of claim 1, wherein determining the unique identifier comprises determining the media access control (MAC) address of each NIC in the partition.

20 3. The method of claim 2, wherein modifying the WOL filters comprises including in each NIC a WOL filter corresponding to each of the determined MAC addresses such that a WOL packet addressed to any NIC in the partition is accepted by each NIC in the partition.

25 4. The method of claim 1, wherein determining an identifier includes creating a universal MAC address common to all NIC's in the partition.

5. The method of claim 4, wherein modifying the WOL filters comprises including a WOL filter corresponding to the universal MAC address on each NIC of the partition.

6. The method of claim 1, wherein configuring the set of nodes is further characterized as configuring a plurality of symmetric multiprocessing devices, each having a set of processors and a system memory shared among the processors, as a partition.

5 7. The method of claim 1, wherein configuring the nodes is further characterized as configuring the nodes to include a boot node and a set of subordinate nodes, wherein the boot node, when reset, is configured to boot all of the nodes into the partition configuration.

8. A data processing system, comprising:

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a plurality of nodes, each node comprising a symmetric multiprocessor system;

means for configuring the plurality of nodes as at least one logical partition wherein each node is associated with one of the partitions; and

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a plurality of network interface cards (NIC's) with at least one NIC corresponding to each of the plurality of nodes, wherein each NIC includes at least one wake-on-LAN filter that is common to all of the NIC's in the partition wherein a WOL packet corresponding to the common WOL filter is accepted by each NIC in the partition there resetting each node in the partition.

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9. The system of claim 8, wherein each NIC in the partition comprises a plurality of WOL filters including a WOL filter corresponding to each NIC in the partition.

25 10. The system of claim 9, wherein the plurality of WOL filters include a WOL filter corresponding to the media access control (MAC) address of each device in the set.

11. The system of claim 8, wherein the common WOL filter corresponds to a universal MAC address shared by each of the NIC's in the partition, wherein the universal MAC address is
30 distinct from the MAC address of each of the NIC's.

12. The system of claim 8, wherein the WOL filter responds to a WOL packet comprising a recognized media access control (MAC) address repeated 16 times.

13. The system of claim 8, wherein each node is further characterized as having its own chassis,
5 firmware, power supplies, and cooling fans.

14. The system of claim 13, the means for configuring the nodes as logical partitions including:

10 a bi-directional scalability link connecting each of the nodes in the system; and

means for sharing resources of each node in the partition under a single operating system image.

15 15. The system of claim 8, wherein the nodes within each partition are further characterized as including a boot node and a set of subordinate nodes, wherein the boot node, when reset, is configured to boot all of the nodes into the partition configuration.

16. A computer program product comprising computer executable instructions, for remote power management in a multi-node data processing system, stored on a computer readable
20 medium, comprising:

computer code means for configuring the system to include at least one multi-node partition;

25 computer code means for determining an identifier associated with each network interface card (NIC) in the partition; and

30 computer code means for modifying, based at least in part on the determined NIC identifiers, wake-on LAN (WOL) filters of each NIC in the partition to include at least one WOL filter common to all of the NIC's in the partition, wherein a WOL packet

corresponding to the at least one common WOL filter produces a reset on the corresponding node such that each partition node is reset in response to the WOL packet.

17. The computer program product of claim 16, wherein determining the unique identifier
5 comprises determining the media access control (MAC) address of each NIC in the partition.

18. The computer program product of claim 17, wherein the code means for modifying the
WOL filters comprises code means for including in each NIC a WOL filter corresponding to
each of the determined MAC addresses such that a WOL packet addressed to any NIC in the
10 partition is accepted by each NIC in the partition.

19. The computer program product of claim 16, wherein the code means for determining an
identifier includes code means for creating a universal MAC address common to all NIC's in the
partition.

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20. The computer program product of claim 19, wherein the code means for modifying the
WOL filters comprises code means for including a WOL filter corresponding to the universal
MAC address on each NIC of the partition.

20 21. The computer program product of claim 16, wherein the code means for modifying the
WOL filters comprises code means for including a WOL filter corresponding to the universal
MAC address on each NIC of the partition, wherein the universal MAC address is distinct from
the MAC address of each of the NIC's.

25 22. The computer program product of claim 16, wherein the code means for configuring the
nodes is further characterized as code means for configuring the nodes to include a boot node
and a set of subordinate nodes, wherein the boot node, when reset, is configured to boot all of the
nodes into the partition configuration.

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